DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018760
Date Inspected: 21-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: Mr. Lv Li Qing, Mr. Xu Tao

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder 050240 used the SMAW process to perform 4F (overhead) position tack welding of a temporary brace to the bottom of segment 13AE side plate SP3060B. This welder is certified to perform 2F tack welding and he is not certified to perform 4F welding. This QA Inspector informed ZPMC CWI Mr. Lv Li Qing that an incident report will be issued to document this 4F position weld being made by a non certified welder.

This QA Inspector observed ZPMC welder Mr. Wei Yingchong, stencil 048043 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to complete tack welds between OBG segment13BE floor beam diaphragm plates to deck plate DP3006A. This QA Inspector observed Mr. Wei Yingchong appeared to be certified to make this weld, the welding electrodes were stored in a portable rod oven which was warm to the touch and the base materials were preheated with a torch prior to welding. This QA Inspector measured a welding current of approximately 160 amps. Items observed on this date appeared to generally comply with applicable

contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Xiaolin, stencil 067079 used flux cored welding procedure specification WPS-B-T-2132 to make OBG segment 14E top anchor plate sub assembly welds AP3002-001-195 and 196. This QA Inspector observed a welding current of approximately 290 amps, 28.0 volts and Mr. Liu Xiaolin appeared to be certified to make these welds. This QA Inspector observed the base materials were heated with a torch to preheat the weld joints. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Mingwu, stencil 066283 used flux cored welding procedure specification WPS-B-T-2132 to make OBG segment 14E top anchor plate sub assembly welds AP3003-001-137 and 138. This QA Inspector observed a welding current of approximately 270 amps, 30.0 volts and Mr. Zhang Mingwu appeared to be certified to make these welds. This QA Inspector observed the base materials were heated with a torch to preheat the weld joints. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Bian Henggui, stencil 051354 used shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make top anchorage plate sub assembly welds AP3002-001-097 and 098. This QA Inspector observed a welding current of approximately 140 amps. This QA Inspector observed Mr. Bian Henggui appeared to be certified to make this weld and the base materials were heated with a torch to preheat the material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 used flux cored welding procedure WPS-B-T-2213-L1-F to make top anchorage plate sub assembly welds AP3003-001-058 and 059. This QA Inspector observed a welding current of approximately 200 amps and 26 volts. This QA Inspector observed Mr. Chen Chuanzong appeared to be certified to make this weld and the base materials were heated with a torch to preheat the material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 16

This QA Inspector observed ZPMC welder Mr. Chu Kun Qian, stencil 218995 used flux cored welding procedure WPS-B-T-2132 to make traffic barrier welds W5-SB1-084-020 through 025. Prior to this QA Inspector making any measurements of the welding parameters Mr. Chu Kun Qian adjusting the flux cored welding machine controls. This QA Inspector observed a welding current of approximately 360 amps. This QA Inspector showed the welding current meter to ZPMC QC Inspector Mr. Ma Qian Li who indicated that this welding current was too high. Mr. Ma Qian Li adjusted the welding machine to approximately 270 amps and 29 volts. Mr. Chu Kun Qian appeared to be certified to make this weld. Following adjustment of the welding current, items observed on this date appeared to generally comply with applicable contract documents. See the photograph below showing Mr. Ma Qian Li adjusting Mr. Chu Kun Qian's welding machine.

This QA Inspector observed ZPMC welder Mr. Jiang Hong, stencil 220314 used flux cored welding procedure WPS-B-T-2133 to make traffic barrier weld W5-SB1-090-100 through 105. This QA Inspector observed a

welding current of approximately 212 amps, 24.4 volts and Mr. Jiang Hong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devy +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer